

SEQUENCE LISTING

<110> SCHNEIDER, ARMIN
 SCHAEBITZ, WOLF-RUEDIGER
 KOLLMAR, RAINER
 SCHWAB, STEFAN

<120> METHODS OF TREATING NEUROLOGICAL CONDITIONS WITH HEMATOPOEITIC GROWTH FACTORS

<130> 229530US

<160> 41

<170> PatentIn version 3.1

<210> 1

<211> 70

<212> PRT

<213> Artificial Sequence

<220>

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<223> Xaa is any amino acid

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<222> (6)..(41)

<223> Xaa is any amino acid

<220>

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<222> (33)..(41)

<223> may be present or absent

<220>

<221> misc_feature

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<223> Xaa is any amino acid

<220>

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<222> (47)..(49)

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<222> (46)..(46)

<223> Xaa may be any amino acid

<220>

<221> misc_feature

<222> (50)..(60)

<223> Xaa is any amino acid

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<221> misc_feature

<222> (57)..(60)

<223> may be present or absent

<220>

<221> misc_feature

<222> (63)..(64)

<223> Xaa is any amino acid

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<223> may be present or absent

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<222> (69)..(69)

<223> Xaa is any amino acid

<400> 1

Asn Xaa Xaa Xaa Xaa Ser Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
1 5 10 15

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
20 25 30

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Leu Val Ile Met Xaa Trp Xaa
35 40 45

Xaa Xaa Pro Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Tyr Phe Xaa Xaa
50 55 60

Val Ile Leu Met Xaa Trp
65 70

<210> 2

<211> 21

<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic DNA

<400> 2
gcgggcaaat caggatctca c 21

<210> 3
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic DNA

<400> 3
cgaagctcag cttgatccag g 21

<210> 4
<211> 280
<212> DNA
<213> Rattus rattus

<400> 4
gcgggcaaat caggatctca cccccattg tccatcttgg ggatcctgtc ctggcctcct 60
gcaccatcag cccaaactgc agcaaactgg accgacagcc aaagatccta tggagactgc 120
aagatgaacc aaaccagcct ggggacagac agcatcacct gcctgacggg tcccaggagt 180
ccatcatcac tctgcctcat ctgaactaca ctcaggcctt cctcttctgc ttggtgccat 240
ggaacaacag cttccaggtc ctggatcaag ctgagcttcg 280

<210> 5
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic DNA

<400> 5
cccctcaaac ctatcctgcc tc 22

<210> 6
<211> 22
<212> DNA
<213> Artificial Sequence

<220>

<223> synthetic DNA

<400> 6

tccaggcaga gatcagcgaa tg

22

<210> 7

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic DNA

<400> 7

ccattgtcca tcttggggat c

21

<210> 8

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic DNA

<400> 8

cctggaagct gttgttccat g

21

<210> 9

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic DNA

<400> 9

accccaccgt gttcttcgac

20

<210> 10

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic DNA

<400> 10

catttgccat ggacaagatg

20

<210> 11

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide sequence

<400> 11

Leu Gly His Ser Leu Gly Ile

1

5

<210> 12

<211> 39

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic DNA

<400> 12

cgggatccgg gaccgcgtat ctgatgacga gcgtgtcaa

39

<210> 13

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic DNA

<400> 13

ctcggagacg ctgaggaagg acctg

25

<210> 14

<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic DNA

<400> 14

ctgcggccct agaccacgcc caccgctccc cgtgacgtcg

40

<210> 15

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic DNA

<400> 15

acgtcgttgg ctcaattatg tc

22

<210> 16
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic DNA

<400> 16
atttatgtca gagatggagg atgg

24

<210> 17
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic DNA

<400> 17
accccaccgt gttcttcgac

20

<210> 18
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic DNA

<400> 18
catttgccat ggacaagatg

20

<210> 19
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic DNA

<400> 19
acgtcgttgg ctcagttatg tc

22

<210> 20
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic DNA

<400> 20
atttatgtca gagatggagg atgg

24

<210> 21
<211> 177
<212> DNA
<213> Rattus rattus

<400> 21
acgtcgttgg ctcagttatg tcagacagga aatctcacca tcccacaatg attgacagct 60
ctcacagga atcccgcctc cgctgggacc aattgacatc acggacagga atacccgccc 120
ctgtggccct gatgggcagg tcctgcctgg ctcccatcct ccattctctga cataaat 177

<210> 22
<211> 400
<212> PRT
<213> Homo sapiens

<400> 22

Met Leu Leu Leu Val Thr Ser Leu Leu Leu Cys Glu Leu Pro His Pro
1 5 10 15

Ala Phe Leu Leu Ile Pro Glu Lys Ser Asp Leu Arg Thr Val Ala Pro
20 25 30

Ala Ser Ser Leu Asn Val Arg Phe Asp Ser Arg Thr Met Asn Leu Ser
35 40 45

Trp Asp Cys Gln Glu Asn Thr Thr Phe Ser Lys Cys Phe Leu Thr Asp
50 55 60

Lys Lys Asn Arg Val Val Glu Pro Arg Leu Ser Asn Asn Glu Cys Ser
65 70 75 80

Cys Thr Phe Arg Glu Ile Cys Leu His Glu Gly Val Thr Phe Glu Val
85 90 95

His Val Asn Thr Ser Gln Arg Gly Phe Gln Gln Lys Leu Leu Tyr Pro
100 105 110

Asn Ser Gly Arg Glu Gly Thr Ala Ala Gln Asn Phe Ser Cys Phe Ile
115 120 125

Tyr Asn Ala Asp Leu Met Asn Cys Thr Trp Ala Arg Gly Pro Thr Ala
 130 135 140

Pro Arg Asp Val Gln Tyr Phe Leu Tyr Ile Arg Asn Ser Lys Arg Arg
 145 150 155 160

Arg Glu Ile Arg Cys Pro Tyr Tyr Ile Gln Asp Ser Gly Thr His Val
 165 170 175

Gly Cys His Leu Asp Asn Leu Ser Gly Leu Thr Ser Arg Asn Tyr Phe
 180 185 190

Leu Val Asn Gly Thr Ser Arg Glu Ile Gly Ile Gln Phe Phe Asp Ser
 195 200 205

Leu Leu Asp Thr Lys Lys Ile Glu Arg Phe Asn Pro Pro Ser Asn Val
 210 215 220

Thr Val Arg Cys Asn Thr Thr His Cys Leu Val Arg Trp Lys Gln Pro
 225 230 235 240

Arg Thr Tyr Gln Lys Leu Ser Tyr Leu Asp Phe Gln Tyr Gln Leu Asp
 245 250 255

Val His Arg Lys Asn Thr Gln Pro Gly Thr Glu Asn Leu Leu Ile Asn
 260 265 270

Val Ser Gly Asp Leu Glu Asn Arg Tyr Asn Phe Pro Ser Ser Glu Pro
 275 280 285

Arg Ala Lys His Ser Val Lys Ile Arg Ala Ala Asp Val Arg Ile Leu
 290 295 300

Asn Trp Ser Ser Trp Ser Glu Ala Ile Glu Phe Gly Ser Asp Asp Gly
 305 310 315 320

Asn Leu Gly Ser Val Tyr Ile Tyr Val Leu Leu Ile Val Gly Thr Leu
 325 330 335

Val Cys Gly Ile Val Leu Gly Phe Leu Phe Lys Arg Phe Leu Arg Ile
 340 345 350

Gln Arg Leu Phe Pro Pro Val Pro Gln Ile Lys Asp Lys Leu Asn Asp

355

360

365

Asn His Glu Val Glu Asp Glu Ile Ile Trp Glu Glu Phe Thr Pro Glu
 370 375 380

Glu Gly Lys Gly Tyr Arg Glu Glu Val Leu Ile Val Lys Glu Ile Thr
 385 390 395 400

<210> 23

<211> 388

<212> PRT

<213> Mus musculus

<400> 23

Met Thr Ser Ser His Ala Met Asn Ile Thr Pro Leu Ala Gln Leu Ala
 1 5 10 15

Leu Leu Phe Ser Thr Leu Leu Leu Pro Gly Thr Gln Ala Leu Leu Ala
 20 25 30

Pro Thr Thr Pro Asp Ala Gly Ser Ala Leu Asn Leu Thr Phe Asp Pro
 35 40 45

Trp Thr Arg Thr Leu Thr Trp Ala Cys Asp Thr Ala Ala Gly Asn Val
 50 55 60

Thr Val Thr Ser Cys Thr Val Thr Ser Arg Glu Ala Gly Ile His Arg
 65 70 75 80

Arg Val Ser Pro Phe Gly Cys Arg Cys Trp Phe Arg Arg Met Met Ala
 85 90 95

Leu His His Gly Val Thr Leu Asp Val Asn Gly Thr Val Gly Gly Ala
 100 105 110

Ala Ala His Trp Arg Leu Ser Phe Val Asn Glu Ser Ala Ala Gly Ser
 115 120 125

Gly Ala Glu Asn Leu Thr Cys Glu Ile Arg Ala Ala Arg Phe Leu Ser
 130 135 140

Cys Ala Trp Arg Glu Gly Pro Ala Ala Pro Ala Asp Val Arg Tyr Ser
 145 150 155 160

Leu Arg Val Leu Asn Ser Thr Gly His Asp Val Ala Arg Cys Met Ala
165 170 175

Asp Pro Gly Asp Asp Val Ile Thr Gln Cys Ile Ala Asn Asp Leu Ser
180 185 190

Leu Leu Gly Ser Glu Ala Tyr Leu Val Val Thr Gly Arg Ser Gly Ala
195 200 205

Gly Pro Val Arg Phe Leu Asp Asp Val Val Ala Thr Lys Ala Leu Glu
210 215 220

Arg Leu Gly Pro Pro Arg Asp Val Thr Ala Ser Cys Asn Ser Ser His
225 230 235 240

Cys Thr Val Ser Trp Ala Pro Pro Ser Thr Trp Ala Ser Leu Thr Ala
245 250 255

Arg Asp Phe Gln Phe Glu Val Gln Trp Gln Ser Ala Glu Pro Gly Ser
260 265 270

Thr Pro Arg Lys Val Leu Val Val Glu Glu Thr Arg Leu Ala Phe Pro
275 280 285

Ser Pro Ala Pro His Gly Gly His Lys Val Lys Val Arg Ala Gly Asp
290 295 300

Thr Arg Met Lys His Trp Gly Glu Trp Ser Pro Ala His Pro Leu Glu
305 310 315 320

Ala Glu Asp Thr Arg Val Pro Gly Ala Leu Leu Tyr Ala Val Thr Ala
325 330 335

Cys Ala Val Leu Leu Cys Ala Leu Ala Leu Gly Val Thr Cys Arg Arg
340 345 350

Phe Glu Val Thr Arg Arg Leu Phe Pro Pro Ile Pro Gly Ile Arg Asp
355 360 365

Lys Val Ser Asp Asp Val Arg Val Asn Pro Glu Thr Leu Arg Lys Asp
370 375 380

Leu Leu Gln Pro
385

<210> 24
<211> 9
<212> PRT
<213> Rattus rattus

<400> 24

Ile Asn Ser Glu Arg Thr Ser Glu Gln
1 5

<210> 25
<211> 127
<212> PRT
<213> Rattus rattus

<400> 25

Ala Pro Thr Arg Ser Pro Asn Pro Val Thr Arg Pro Trp Lys His Val
1 5 10 15

Asp Ala Ile Lys Glu Ala Leu Ser Leu Leu Asn Asp Met Arg Ala Leu
20 25 30

Glu Asn Glu Lys Asn Glu Asp Val Asp Ile Ile Ser Asn Glu Phe Ser
35 40 45

Ile Gln Arg Pro Thr Cys Val Gln Thr Arg Leu Lys Leu Tyr Lys Gln
50 55 60

Gly Leu Arg Gly Asn Leu Thr Lys Leu Asn Gly Ala Leu Thr Met Ile
65 70 75 80

Ala Ser His Tyr Gln Thr Asn Cys Pro Pro Thr Pro Glu Thr Asp Cys
85 90 95

Glu Ile Asp Val Thr Thr Phe Glu Asp Phe Ile Lys Asn Leu Lys Gly
100 105 110

Phe Leu Phe Asp Ile Pro Phe Asp Cys Trp Lys Pro Val Gln Lys
115 120 125

<210> 26
<211> 141
<212> PRT

<213> Mus musculus

<400> 26

Met Trp Leu Gln Asn Leu Arg Leu Lys Ile Phe Glu Gln Gly Leu Arg
1 5 10 15

Gly Asn Phe Thr Lys Leu Lys Gly Ala Leu Asn Met Thr Ala Ser Tyr
20 25 30

Tyr Gln Thr Tyr Cys Pro Pro Thr Pro Glu Thr Asp Cys Glu Thr Gln
35 40 45

Val Thr Thr Tyr Ala Asp Phe Ile Asp Ser Leu Lys Thr Leu Phe Leu
50 55 60

Gly Ile Val Val Tyr Ser Leu Ser Ala Pro Thr Arg Ser Pro Ile Phe
65 70 75 80

Leu Thr Asp Ile Pro Phe Glu Cys Lys Lys Pro Gly Gln Lys Thr Val
85 90 95

Thr Arg Pro Trp Lys His Val Glu Ala Ile Lys Glu Ala Leu Asn Leu
100 105 110

Leu Asp Asp Met Pro Val Thr Leu Asn Glu Glu Val Glu Val Val Ser
115 120 125

Asn Glu Phe Ser Phe Lys Lys Leu Thr Cys Val Gln Thr
130 135 140

<210> 27

<211> 144

<212> PRT

<213> Homo sapiens

<400> 27

Met Trp Leu Gln Ser Leu Leu Leu Leu Gly Thr Val Ala Cys Ser Ile
1 5 10 15

Ser Ala Pro Ala Arg Ser Pro Ser Pro Ser Thr Gln Pro Trp Glu His
20 25 30

Val Asn Ala Ile Gln Glu Ala Arg Arg Leu Leu Asn Leu Ser Arg Asp
35 40 45

Thr Ala Ala Glu Met Asn Glu Thr Val Glu Val Ile Ser Glu Met Phe
50 55 60

Asp Leu Gln Glu Pro Thr Cys Leu Gln Thr Arg Leu Glu Leu Tyr Lys
65 70 75 80

Gln Gly Leu Arg Gly Ser Leu Thr Lys Leu Lys Gly Pro Leu Thr Met
85 90 95

Met Ala Ser His Tyr Lys Gln His Cys Pro Pro Thr Pro Glu Thr Ser
100 105 110

Cys Ala Thr Gln Ile Ile Thr Phe Glu Ser Phe Lys Glu Asn Leu Lys
115 120 125

Asp Phe Leu Leu Val Ile Pro Phe Asp Cys Trp Glu Pro Val Gln Glu
130 135 140

<210> 28
<211> 207
<212> PRT
<213> Homo sapiens

<400> 28

Met Ala Gly Pro Ala Thr Gln Ser Pro Met Lys Leu Met Ala Leu Gln
1 5 10 15

Leu Leu Leu Trp His Ser Ala Leu Trp Thr Val Gln Glu Ala Thr Pro
20 25 30

Leu Gly Pro Ala Ser Ser Leu Pro Gln Ser Phe Leu Leu Lys Cys Leu
35 40 45

Glu Gln Val Arg Lys Ile Gln Gly Asp Gly Ala Ala Leu Gln Glu Lys
50 55 60

Leu Val Ser Glu Cys Ala Thr Tyr Lys Leu Cys His Pro Glu Glu Leu
65 70 75 80

Val Leu Leu Gly His Ser Leu Gly Ile Pro Trp Ala Pro Leu Ser Ser
85 90 95

Cys Pro Ser Gln Ala Leu Gln Leu Ala Gly Cys Leu Ser Gln Leu His
100 105 110

Ser Gly Leu Phe Leu Tyr Gln Gly Leu Leu Gln Ala Leu Glu Gly Ile
115 120 125

Ser Pro Glu Leu Gly Pro Thr Leu Asp Thr Leu Gln Leu Asp Val Ala
130 135 140

Asp Phe Ala Thr Thr Ile Trp Gln Gln Met Glu Glu Leu Gly Met Ala
145 150 155 160

Pro Ala Leu Gln Pro Thr Gln Gly Ala Met Pro Ala Phe Ala Ser Ala
165 170 175

Phe Gln Arg Arg Ala Gly Gly Val Leu Val Ala Ser His Leu Gln Ser
180 185 190

Phe Leu Glu Val Ser Tyr Arg Val Leu Arg His Leu Ala Gln Pro
195 200 205

<210> 29
<211> 208
<212> PRT
<213> Mus musculus

<400> 29

Met Ala Gln Leu Ser Ala Gln Arg Arg Met Lys Leu Met Ala Leu Gln
1 5 10 15

Leu Leu Leu Trp Gln Ser Ala Leu Trp Ser Gly Arg Glu Ala Val Pro
20 25 30

Leu Val Thr Val Ser Ala Leu Pro Pro Ser Leu Pro Leu Pro Arg Ser
35 40 45

Phe Leu Leu Lys Ser Leu Glu Gln Val Arg Lys Ile Gln Ala Ser Gly
50 55 60

Ser Val Leu Leu Glu Gln Leu Cys Ala Thr Tyr Lys Leu Cys His Pro
65 70 75 80

Glu Glu Leu Val Leu Leu Gly His Ser Leu Gly Ile Pro Lys Ala Ser
85 90 95

Leu Ser Gly Cys Ser Ser Gln Ala Leu Gln Gln Thr Gln Cys Leu Ser
 100 105 110

Gln Leu His Ser Gly Leu Cys Leu Tyr Gln Gly Leu Leu Gln Ala Leu
 115 120 125

Ser Gly Ile Ser Pro Ala Leu Ala Pro Thr Leu Asp Leu Leu Gln Leu
 130 135 140

Asp Val Ala Asn Phe Ala Thr Thr Ile Trp Gln Gln Met Glu Asn Leu
 145 150 155 160

Gly Val Ala Pro Thr Val Gln Pro Thr Gln Ser Ala Met Pro Ala Phe
 165 170 175

Thr Ser Ala Phe Gln Arg Arg Ala Gly Gly Val Leu Ala Ile Ser Tyr
 180 185 190

Leu Gln Gly Phe Leu Glu Thr Ala Arg Leu Ala Leu His His Leu Ala
 195 200 205

<210> 30
 <211> 214
 <212> PRT
 <213> Rattus norvegicus

<400> 30

Met Lys Leu Met Ala Leu Gln Leu Leu Leu Trp His Ser Ala Leu Trp
 1 5 10 15

Ser Gly Gln Glu Ala Ile Pro Leu Leu Thr Val Ser Ser Leu Pro Pro
 20 25 30

Ser Leu Pro Leu Pro Arg Ser Phe Leu Leu Lys Ser Leu Glu Gln Val
 35 40 45

Arg Lys Ile Gln Ala Arg Asn Thr Glu Leu Leu Glu Gln Leu Cys Ala
 50 55 60

Thr Tyr Lys Leu Cys His Pro Glu Glu Leu Val Leu Phe Gly His Ser
 65 70 75 80

Leu Gly Ile Pro Lys Ala Ser Leu Ser Ser Cys Ser Ser Gln Ala Leu
85 90 95

Gln Gln Thr Lys Cys Leu Ser Gln Leu His Ser Gly Leu Phe Leu Tyr
100 105 110

Gln Gly Leu Leu Gln Ala Leu Ala Gly Ile Ser Ser Glu Leu Ala Pro
115 120 125

Thr Leu Asp Met Leu His Leu Asp Val Asp Asn Phe Ala Thr Thr Ile
130 135 140

Trp Gln Gln Met Glu Ser Leu Gly Val Ala Pro Thr Val Gln Pro Thr
145 150 155 160

Gln Ser Thr Met Pro Ile Phe Thr Ser Ala Phe Gln Arg Arg Ala Gly
165 170 175

Gly Val Leu Val Thr Ser Tyr Leu Gln Ser Phe Leu Glu Thr Ala His
180 185 190

His Ala Leu His His Leu Pro Arg Pro Ala Gln Lys His Phe Pro Glu
195 200 205

Ser Leu Phe Ile Ser Ile
210

<210> 31
<211> 195
<212> PRT
<213> Felis catus

<400> 31

Met Lys Leu Thr Ala Leu Gln Leu Leu Leu Trp His Ser Ala Leu Trp
1 5 10 15

Met Val Gln Glu Ala Thr Pro Leu Gly Pro Thr Ser Ser Leu Pro Gln
20 25 30

Ser Phe Leu Leu Lys Cys Leu Glu Gln Val Arg Lys Val Gln Ala Asp
35 40 45

Gly Thr Ala Leu Gln Glu Arg Leu Cys Ala Ala His Lys Leu Cys His
50 55 60

Pro Glu Glu Leu Val Leu Leu Gly His Ala Leu Gly Ile Pro Gln Ala
65 70 75 80

Pro Leu Ser Ser Cys Ser Ser Gln Ala Leu Gln Leu Thr Gly Cys Leu
85 90 95

Arg Gln Leu His Ser Gly Leu Phe Leu Tyr Gln Gly Leu Leu Gln Ala
100 105 110

Leu Ala Gly Ile Ser Pro Glu Leu Ala Pro Thr Leu Asp Met Leu Gln
115 120 125

Leu Asp Ile Thr Asp Phe Ala Ile Asn Ile Trp Gln Gln Met Glu Asp
130 135 140

Val Gly Met Ala Pro Ala Val Pro Pro Thr Gln Gly Thr Met Pro Thr
145 150 155 160

Phe Thr Ser Ala Phe Gln Arg Arg Ala Gly Gly Thr Leu Val Ala Ser
165 170 175

Asn Leu Gln Ser Phe Leu Glu Val Ala Tyr Arg Ala Leu Arg His Phe
180 185 190

Thr Lys Pro
195

<210> 32
<211> 195
<212> PRT
<213> Bos taurus

<400> 32

Met Lys Leu Met Val Leu Gln Leu Leu Leu Trp His Ser Ala Leu Trp
1 5 10 15

Thr Val His Glu Ala Thr Pro Leu Gly Pro Ala Arg Ser Leu Pro Gln
20 25 30

Ser Phe Leu Leu Lys Cys Leu Glu Gln Val Arg Lys Ile Gln Ala Asp
35 40 45

Gly Ala Glu Leu Gln Glu Arg Leu Cys Ala Ala His Lys Leu Cys His
50 55 60

Pro Glu Glu Leu Met Leu Leu Arg His Ser Leu Gly Ile Pro Gln Ala
65 70 75 80

Pro Leu Ser Ser Cys Ser Ser Gln Ser Leu Gln Leu Thr Ser Cys Leu
85 90 95

Asn Gln Leu His Gly Gly Leu Phe Leu Tyr Gln Gly Leu Leu Gln Ala
100 105 110

Leu Ala Gly Ile Ser Pro Glu Leu Ala Pro Thr Leu Asp Thr Leu Gln
115 120 125

Leu Asp Val Thr Asp Phe Ala Thr Asn Ile Trp Leu Gln Met Glu Asp
130 135 140

Leu Gly Ala Ala Pro Ala Val Gln Pro Thr Gln Gly Ala Met Pro Thr
145 150 155 160

Phe Thr Ser Ala Phe Gln Arg Arg Ala Gly Gly Val Leu Val Ala Ser
165 170 175

Gln Leu His Arg Phe Leu Glu Leu Ala Tyr Arg Gly Leu Arg Tyr Leu
180 185 190

Ala Glu Pro
195

<210> 33
<211> 195
<212> PRT
<213> Sus scrofa

<400> 33

Met Lys Leu Met Ala Leu Gln Leu Leu Leu Trp His Ile Ala Leu Trp
1 5 10 15

Met Val Pro Glu Ala Ala Pro Leu Ser Pro Ala Ser Ser Leu Pro Gln
20 25 30

Ser Phe Leu Leu Lys Cys Leu Glu Gln Val Arg Lys Ile Gln Ala Asp
35 40 45

Gly Ala Glu Leu Gln Glu Arg Leu Cys Ala Thr His Lys Leu Cys His
50 55 60

Pro Gln Glu Leu Val Leu Leu Gly His Ser Leu Gly Leu Pro Gln Ala
65 70 75 80

Ser Leu Ser Ser Cys Ser Ser Gln Ala Leu Gln Leu Thr Gly Cys Leu
85 90 95

Asn Gln Leu His Gly Gly Leu Val Leu Tyr Gln Gly Leu Leu Gln Ala
100 105 110

Leu Ala Gly Ile Ser Pro Glu Leu Ala Pro Ala Leu Asp Ile Leu Gln
115 120 125

Leu Asp Val Thr Asp Leu Ala Thr Asn Ile Trp Leu Gln Met Glu Asp
130 135 140

Leu Arg Met Ala Pro Ala Ser Leu Pro Thr Gln Gly Thr Val Pro Thr
145 150 155 160

Phe Thr Ser Ala Phe Gln Arg Arg Ala Gly Gly Val Leu Val Val Ser
165 170 175

Gln Leu Gln Ser Phe Leu Glu Leu Ala Tyr Arg Val Leu Arg Tyr Leu
180 185 190

Ala Glu Pro
195

<210> 34
<211> 836
<212> PRT
<213> Homo sapiens

<400> 34

Met Ala Arg Leu Gly Asn Cys Ser Leu Thr Trp Ala Ala Leu Ile Ile
1 5 10 15

Leu Leu Leu Pro Gly Ser Leu Glu Glu Cys Gly His Ile Ser Val Ser
20 25 30

Ala Pro Ile Val His Leu Gly Asp Pro Ile Thr Ala Ser Cys Ile Ile
 35 40 45

Lys Gln Asn Cys Ser His Leu Asp Pro Glu Pro Gln Ile Leu Trp Arg
 50 55 60

Leu Gly Ala Glu Leu Gln Pro Gly Gly Arg Gln Gln Arg Leu Ser Asp
 65 70 75 80

Gly Thr Gln Glu Ser Ile Ile Thr Leu Pro His Leu Asn His Thr Gln
 85 90 95

Ala Phe Leu Ser Cys Cys Leu Asn Trp Gly Asn Ser Leu Gln Ile Leu
 100 105 110

Asp Gln Val Glu Leu Arg Ala Gly Tyr Pro Pro Ala Ile Pro His Asn
 115 120 125

Leu Ser Cys Leu Met Asn Leu Thr Thr Ser Ser Leu Ile Cys Gln Trp
 130 135 140

Glu Pro Gly Pro Glu Thr His Leu Pro Thr Ser Phe Thr Leu Lys Ser
 145 150 155 160

Phe Lys Ser Arg Gly Asn Cys Gln Thr Gln Gly Asp Ser Ile Leu Asp
 165 170 175

Cys Val Pro Lys Asp Gly Gln Ser His Cys Cys Ile Pro Arg Lys His
 180 185 190

Leu Leu Leu Tyr Gln Asn Met Gly Ile Trp Val Gln Ala Glu Asn Ala
 195 200 205

Leu Gly Thr Ser Met Ser Pro Gln Leu Cys Leu Asp Pro Met Asp Val
 210 215 220

Val Lys Leu Glu Pro Pro Met Leu Arg Thr Met Asp Pro Ser Pro Glu
 225 230 235 240

Ala Ala Pro Pro Gln Ala Gly Cys Leu Gln Leu Cys Trp Glu Pro Trp
 245 250 255

Gln Pro Gly Leu His Ile Asn Gln Lys Cys Glu Leu Arg His Lys Pro

260

265

270

Gln Arg Gly Glu Ala Ser Trp Ala Leu Val Gly Pro Leu Pro Leu Glu
 275 280 285

Ala Leu Gln Tyr Glu Leu Cys Gly Leu Leu Pro Ala Thr Ala Tyr Thr
 290 295 300

Leu Gln Ile Arg Cys Ile Arg Trp Pro Leu Pro Gly His Trp Ser Asp
 305 310 315 320

Trp Ser Pro Ser Leu Glu Leu Arg Thr Thr Glu Arg Ala Pro Thr Val
 325 330 335

Arg Leu Asp Thr Trp Trp Arg Gln Arg Gln Leu Asp Pro Arg Thr Val
 340 345 350

Gln Leu Phe Trp Lys Pro Val Pro Leu Glu Glu Asp Ser Gly Arg Ile
 355 360 365

Gln Gly Tyr Val Val Ser Trp Arg Pro Ser Gly Gln Ala Gly Ala Ile
 370 375 380

Leu Pro Leu Cys Asn Thr Thr Glu Leu Ser Cys Thr Phe His Leu Pro
 385 390 395 400

Ser Glu Ala Gln Glu Val Ala Leu Val Ala Tyr Asn Ser Ala Gly Thr
 405 410 415

Ser Arg Pro Thr Pro Val Val Phe Ser Glu Ser Arg Gly Pro Ala Leu
 420 425 430

Thr Arg Leu His Ala Met Ala Arg Asp Pro His Ser Leu Trp Val Gly
 435 440 445

Trp Glu Pro Pro Asn Pro Trp Pro Gln Gly Tyr Val Ile Glu Trp Gly
 450 455 460

Leu Gly Pro Pro Ser Ala Ser Asn Ser Asn Lys Thr Trp Arg Met Glu
 465 470 475 480

Gln Asn Gly Arg Ala Thr Gly Phe Leu Leu Lys Glu Asn Ile Arg Pro
 485 490 495

Phe Gln Leu Tyr Glu Ile Ile Val Thr Pro Leu Tyr Gln Asp Thr Met
500 505 510

Gly Pro Ser Gln His Val Tyr Ala Tyr Ser Gln Glu Met Ala Pro Ser
515 520 525

His Ala Pro Glu Leu His Leu Lys His Ile Gly Lys Thr Trp Ala Gln
530 535 540

Leu Glu Trp Val Pro Glu Pro Pro Glu Leu Gly Lys Ser Pro Leu Thr
545 550 555 560

His Tyr Thr Ile Phe Trp Thr Asn Ala Gln Asn Gln Ser Phe Ser Ala
565 570 575

Ile Leu Asn Ala Ser Ser Arg Gly Phe Val Leu His Gly Leu Glu Pro
580 585 590

Ala Ser Leu Tyr His Ile His Leu Met Ala Ala Ser Gln Ala Gly Ala
595 600 605

Thr Asn Ser Thr Val Leu Thr Leu Met Thr Leu Thr Pro Glu Gly Ser
610 615 620

Glu Leu His Ile Ile Leu Gly Leu Phe Gly Leu Leu Leu Leu Thr
625 630 635 640

Cys Leu Cys Gly Thr Ala Trp Leu Cys Cys Ser Pro Asn Arg Lys Asn
645 650 655

Pro Leu Trp Pro Ser Val Pro Asp Pro Ala His Ser Ser Leu Gly Ser
660 665 670

Trp Val Pro Thr Ile Met Glu Glu Asp Ala Phe Gln Leu Pro Gly Leu
675 680 685

Gly Thr Pro Pro Ile Thr Lys Leu Thr Val Leu Glu Glu Asp Glu Lys
690 695 700

Lys Pro Val Pro Trp Glu Ser His Asn Ser Ser Glu Thr Cys Gly Leu
705 710 715 720

Pro Thr Leu Val Gln Thr Tyr Val Leu Gln Gly Asp Pro Arg Ala Val
725 730 735

Ser Thr Gln Pro Gln Ser Gln Ser Gly Thr Ser Asp Gln Val Leu Tyr
740 745 750

Gly Gln Leu Leu Gly Ser Pro Thr Ser Pro Gly Pro Gly His Tyr Leu
755 760 765

Arg Cys Asp Ser Thr Gln Pro Leu Leu Ala Gly Leu Thr Pro Ser Pro
770 775 780

Lys Ser Tyr Glu Asn Leu Trp Phe Gln Ala Ser Pro Leu Gly Thr Leu
785 790 795 800

Val Thr Pro Ala Pro Ser Gln Glu Asp Asp Cys Val Phe Gly Pro Leu
805 810 815

Leu Asn Phe Pro Leu Leu Gln Gly Ile Arg Val His Gly Met Glu Ala
820 825 830

Leu Gly Ser Phe
835

<210> 35
<211> 837
<212> PRT
<213> Mus musculus

<400> 35

Met Val Gly Leu Gly Ala Cys Thr Leu Thr Gly Val Thr Leu Ile Phe
1 5 10 15

Leu Leu Leu Pro Arg Ser Leu Glu Ser Cys Gly His Ile Glu Ile Ser
20 25 30

Pro Pro Val Val Arg Leu Gly Asp Pro Val Leu Ala Ser Cys Thr Ile
35 40 45

Ser Pro Asn Cys Ser Lys Leu Asp Gln Gln Ala Lys Ile Leu Trp Arg
50 55 60

Leu Gln Asp Glu Pro Ile Gln Pro Gly Asp Arg Gln His His Leu Pro

65

70

75

80

Asp Gly Thr Gln Glu Ser Leu Ile Thr Leu Pro His Leu Asn Tyr Thr
85 90 95

Gln Ala Phe Leu Phe Cys Leu Val Pro Trp Glu Asp Ser Val Gln Leu
100 105 110

Leu Asp Gln Ala Glu Leu His Ala Gly Tyr Pro Pro Ala Ser Pro Ser
115 120 125

Asn Leu Ser Cys Leu Met His Leu Thr Thr Asn Ser Leu Val Cys Gln
130 135 140

Trp Glu Pro Gly Pro Glu Thr His Leu Pro Thr Ser Phe Ile Leu Lys
145 150 155 160

Ser Phe Arg Ser Arg Ala Asp Cys Gln Tyr Gln Gly Asp Thr Ile Pro
165 170 175

Asp Cys Val Ala Lys Lys Arg Gln Asn Asn Cys Ser Ile Pro Arg Lys
180 185 190

Asn Leu Leu Leu Tyr Gln Tyr Met Ala Ile Trp Val Gln Ala Glu Asn
195 200 205

Met Leu Gly Ser Ser Glu Ser Pro Lys Leu Cys Leu Asp Pro Met Asp
210 215 220

Val Val Lys Leu Glu Pro Pro Met Leu Gln Ala Leu Asp Ile Gly Pro
225 230 235 240

Asp Val Val Ser His Gln Pro Gly Cys Leu Trp Leu Ser Trp Lys Pro
245 250 255

Trp Lys Pro Ser Glu Tyr Met Glu Gln Glu Cys Glu Leu Arg Tyr Gln
260 265 270

Pro Gln Leu Lys Gly Ala Asn Trp Thr Leu Val Phe His Leu Pro Ser
275 280 285

Ser Lys Asp Gln Phe Glu Leu Cys Gly Leu His Gln Ala Pro Val Tyr
290 295 300

Thr Leu Gln Met Arg Cys Ile Arg Ser Ser Leu Pro Gly Phe Trp Ser
305 310 315 320

Pro Trp Ser Pro Gly Leu Gln Leu Arg Pro Thr Met Lys Ala Pro Thr
325 330 335

Ile Arg Leu Asp Thr Trp Cys Gln Lys Lys Gln Leu Asp Pro Gly Thr
340 345 350

Val Ser Val Gln Leu Phe Trp Lys Pro Thr Pro Leu Gln Glu Asp Ser
355 360 365

Gly Gln Ile Gln Gly Tyr Leu Leu Ser Trp Asn Ser Pro Asp His Gln
370 375 380

Gly Gln Asp Ile His Leu Cys Asn Thr Thr Gln Leu Ser Cys Ile Phe
385 390 395 400

Leu Leu Pro Ser Glu Ala Gln Asn Val Thr Leu Val Ala Tyr Asn Lys
405 410 415

Ala Gly Thr Ser Ser Pro Thr Thr Val Val Phe Leu Glu Asn Glu Gly
420 425 430

Pro Ala Val Thr Gly Leu His Ala Met Ala Gln Asp Leu Asn Thr Ile
435 440 445

Trp Val Asp Trp Glu Ala Pro Ser Leu Leu Pro Gln Gly Tyr Leu Ile
450 455 460

Glu Trp Glu Met Ser Ser Pro Ser Tyr Asn Asn Ser Tyr Lys Ser Trp
465 470 475 480

Met Ile Glu Pro Asn Gly Asn Ile Thr Gly Ile Leu Leu Lys Asp Asn
485 490 495

Ile Asn Pro Phe Gln Leu Tyr Arg Ile Thr Val Ala Pro Leu Tyr Pro
500 505 510

Gly Ile Val Gly Pro Pro Val Asn Val Tyr Thr Phe Ala Gly Glu Arg
515 520 525

Ala Pro Pro His Ala Pro Ala Leu His Leu Lys His Val Gly Thr Thr
 530 535 540

Trp Ala Gln Leu Glu Trp Val Pro Glu Ala Pro Arg Leu Gly Met Ile
 545 550 555 560

Pro Leu Thr His Tyr Thr Ile Phe Trp Ala Asp Ala Gly Asp His Ser
 565 570 575

Phe Ser Val Thr Leu Asn Ile Ser Leu His Asp Phe Val Leu Lys His
 580 585 590

Leu Glu Pro Ala Ser Leu Tyr His Val Tyr Leu Met Ala Thr Ser Arg
 595 600 605

Ala Gly Ser Thr Asn Ser Thr Gly Leu Thr Leu Arg Thr Leu Asp Pro
 610 615 620

Ser Asp Leu Asn Ile Phe Leu Gly Ile Leu Cys Leu Val Leu Leu Ser
 625 630 635 640

Thr Thr Cys Val Val Thr Trp Leu Cys Cys Lys Arg Arg Gly Lys Thr
 645 650 655

Ser Phe Trp Ser Asp Val Pro Asp Pro Ala His Ser Ser Leu Ser Ser
 660 665 670

Trp Leu Pro Thr Ile Met Thr Glu Glu Thr Phe Gln Leu Pro Ser Phe
 675 680 685

Trp Asp Ser Ser Val Pro Ser Ile Thr Lys Ile Thr Glu Leu Glu Glu
 690 695 700

Asp Lys Lys Pro Thr His Trp Asp Ser Glu Ser Ser Gly Asn Gly Ser
 705 710 715 720

Leu Pro Ala Leu Val Gln Ala Tyr Val Leu Gln Gly Asp Pro Arg Glu
 725 730 735

Ile Ser Asn Gln Ser Gln Pro Pro Ser Arg Thr Gly Asp Gln Val Leu
 740 745 750

Tyr Gly Gln Val Leu Glu Ser Pro Thr Ser Pro Gly Val Met Gln Tyr
755 760 765

Ile Arg Ser Asp Ser Thr Gln Pro Leu Leu Gly Gly Pro Thr Pro Ser
770 775 780

Pro Lys Ser Tyr Glu Asn Ile Trp Phe His Ser Arg Pro Gln Glu Thr
785 790 795 800

Phe Val Pro Gln Pro Pro Asn Gln Glu Asp Asp Cys Val Phe Gly Pro
805 810 815

Pro Phe Asp Phe Pro Leu Phe Gln Gly Leu Gln Val His Gly Val Glu
820 825 830

Glu Gln Gly Gly Phe
835

<210> 36
<211> 112
<212> PRT
<213> Rattus rattus

<400> 36

Leu Glu Gly Cys Gly Gln Ile Arg Ile Ser Pro Pro Ile Val His Leu
1 5 10 15

Gly Asp Pro Val Leu Ala Ser Cys Thr Ile Ser Pro Asn Cys Ser Lys
20 25 30

Leu Asp Arg Gln Pro Lys Ile Leu Trp Arg Leu Gln Asp Glu Pro Asn
35 40 45

Gln Pro Gly Asp Arg Gln His His Leu Pro Asp Gly Ser Gln Glu Ser
50 55 60

Ile Ile Thr Leu Pro His Leu Asn Tyr Thr Gln Ala Phe Leu Phe Cys
65 70 75 80

Leu Val Pro Trp Asn Asn Ser Phe Gln Val Leu Asp Gln Ala Glu Leu
85 90 95

Arg Ala Gly Cys Lys Ser Leu Gln Pro Pro Thr His Leu Leu Gln Cys
100 105 110

<210> 37
 <211> 174
 <212> PRT
 <213> Homo sapiens

<400> 37

Thr Pro Leu Gly Pro Ala Ser Ser Leu Pro Gln Ser Phe Leu Leu Lys
 1 5 10 15

Cys Leu Glu Gln Val Arg Lys Ile Gln Gly Asp Gly Ala Ala Leu Gln
 20 25 30

Glu Lys Leu Cys Ala Thr Tyr Lys Leu Cys His Pro Glu Glu Leu Val
 35 40 45

Leu Leu Gly His Ser Leu Gly Ile Pro Trp Ala Pro Leu Ser Ser Cys
 50 55 60

Pro Ser Gln Ala Leu Gln Leu Ala Gly Cys Leu Ser Gln Leu His Ser
 65 70 75 80

Gly Leu Phe Leu Tyr Gln Gly Leu Leu Gln Ala Leu Glu Gly Ile Ser
 85 90 95

Pro Glu Leu Gly Pro Thr Leu Asp Thr Leu Gln Leu Asp Val Ala Asp
 100 105 110

Phe Ala Thr Thr Ile Trp Gln Gln Met Glu Glu Leu Gly Met Ala Pro
 115 120 125

Ala Leu Gln Pro Thr Gln Gly Ala Met Pro Ala Phe Ala Ser Ala Phe
 130 135 140

Gln Arg Arg Ala Gly Gly Val Leu Val Ala Ser His Leu Gln Ser Phe
 145 150 155 160

Leu Glu Val Ser Tyr Arg Val Leu Arg His Leu Ala Gln Pro
 165 170

<210> 38
 <211> 175
 <212> PRT
 <213> Homo sapiens

<400> 38

Met Thr Pro Leu Gly Pro Ala Ser Ser Leu Pro Gln Ser Phe Leu Leu
1 5 10 15

Lys Cys Leu Glu Gln Val Arg Lys Ile Gln Gly Asp Gly Ala Ala Leu
20 25 30

Gln Glu Lys Leu Cys Ala Thr Tyr Lys Leu Cys His Pro Glu Glu Leu
35 40 45

Val Leu Leu Gly His Ser Leu Gly Ile Pro Trp Ala Pro Leu Ser Ser
50 55 60

Cys Pro Ser Gln Ala Leu Gln Leu Ala Gly Cys Leu Ser Gln Leu His
65 70 75 80

Ser Gly Leu Phe Leu Tyr Gln Gly Leu Leu Gln Ala Leu Glu Gly Ile
85 90 95

Ser Pro Glu Leu Gly Pro Thr Leu Asp Thr Leu Gln Leu Asp Val Ala
100 105 110

Asp Phe Ala Thr Thr Ile Trp Gln Gln Met Glu Glu Leu Gly Met Ala
115 120 125

Pro Ala Leu Gln Pro Thr Gln Gly Ala Met Pro Ala Phe Ala Ser Ala
130 135 140

Phe Gln Arg Arg Ala Gly Gly Val Leu Val Ala Ser His Leu Gln Ser
145 150 155 160

Phe Leu Glu Val Ser Tyr Arg Val Leu Arg His Leu Ala Gln Pro
165 170 175

<210> 39

<211> 177

<212> PRT

<213> Homo sapiens

<400> 39

Thr Pro Leu Gly Pro Ala Ser Ser Leu Pro Gln Ser Phe Leu Leu Lys
1 5 10 15

Cys Leu Glu Gln Val Arg Lys Ile Gln Gly Asp Gly Ala Ala Leu Gln
 20 25 30

Glu Lys Leu Val Ser Glu Cys Ala Thr Tyr Lys Leu Cys His Pro Glu
 35 40 45

Glu Leu Val Leu Leu Gly His Ser Leu Gly Ile Pro Trp Ala Pro Leu
 50 55 60

Ser Ser Cys Pro Ser Gln Ala Leu Gln Leu Ala Gly Cys Leu Ser Gln
 65 70 75 80

Leu His Ser Gly Leu Phe Leu Tyr Gln Gly Leu Leu Gln Ala Leu Glu
 85 90 95

Gly Ile Ser Pro Glu Leu Gly Pro Thr Leu Asp Thr Leu Gln Leu Asp
 100 105 110

Val Ala Asp Phe Ala Thr Thr Ile Trp Gln Gln Met Glu Glu Leu Gly
 115 120 125

Met Ala Pro Ala Leu Gln Pro Thr Gln Gly Ala Met Pro Ala Phe Ala
 130 135 140

Ser Ala Phe Gln Arg Arg Ala Gly Gly Val Leu Val Ala Ser His Leu
 145 150 155 160

Gln Ser Phe Leu Glu Val Ser Tyr Arg Val Leu Arg His Leu Ala Gln
 165 170 175

Pro

<210> 40
 <211> 1155
 <212> DNA
 <213> Rattus rattus

<400> 40
 atgagcatca ttccctgcc tcagctcctc gccctgctct gctgctgagg acttgctgct 60
 gctactcagg gcccacaga cccgtccacg cccctaacc tgggcctcgc ccacttcac 120
 aacctgacct tcgaccccg gacctggaca ctgagctggg cctgtggcgg ccatgatggg 180

gcagtgatgt cgtgcacggt gattgaccag gaggcagga tccggcgcag agtgcggtcc 240
 cggggctgcc gctgccggtt tcagccaatg gagttacacc gcggggtcga cctggagggtt 300
 gcgggggaca aaggccatgc ccaagtccat cagactctgc gcttcgagaa tgaagggtgcc 360
 ccaggctccg gggcagagaa cctgacctgt gagatccttg ctgcccactt cctgtgctgt 420
 tattgggagg tggggccggc tgcacccgat gacatcagat actcactgcg cgtgctcaac 480
 gccactggtc atgaggtcgc cagctgctcc gctgcccccg gaaccccacc cacgcgttgc 540
 caggctgatg atctcacaca tctgccccgc ctgcataca tcgtcgtcac tgggcagagc 600
 cggacggggc tgggtgcggtt cctggatgcc gtggtaaca ccaaggcat tgagcgctg 660
 ggtccccag ataacgtctc tgctcctgt aacttctccc actgcacat cacctgggct 720
 ccgcccccta cctgggcgcc tatgacggaa caggatttcc gctttgagat cgagtggaag 780
 aaggcggagc ccagcagcat tgcccagaag gtggttatcg cagggcgcga ggacaacgcc 840
 ttcgccttcc ccagccccgc ccccgtggc cgcctctggg tcagagttcg tgcaggggac 900
 acacgcagtg atcgggtggag cgactggagc cccgccttgg agctcggctc ggaggccaca 960
 acccgcgcgc gggccctggt gttggcggcg tcgagctgtg cagccctgct gtgtgcgctg 1020
 gcactggggg cggcctgcag gagactcgcg ctctcacgcc gcctcctccc ccccatcccc 1080
 gggatccggg accgcgtatc tgatgacgag cgtgtcaact cggagacgct gaggaaggac 1140
 ctgctgcggc cctag 1155

<210> 41
 <211> 384
 <212> PRT
 <213> Rattus rattus

<400> 41

Met Ser Ile Ile Pro Leu Pro Gln Leu Leu Ala Leu Leu Cys Cys Cys
 1 5 10 15

Gly Leu Ala Ala Ala Thr Gln Gly Pro Thr Asp Pro Ser Thr Pro Pro
 20 25 30

Asn Leu Gly Leu Ala His Phe His Asn Leu Thr Phe Asp Pro Gly Thr
 35 40 45

Trp Thr Leu Ser Trp Ala Cys Gly Gly His Asp Gly Ala Val Met Ser
 50 55 60

Cys Thr Val Ile Asp Gln Glu Ala Gly Ile Arg Arg Arg Val Arg Ser
65 70 75 80

Arg Gly Cys Arg Cys Arg Phe Gln Pro Met Glu Leu His Arg Gly Val
85 90 95

Asp Leu Glu Val Ala Gly Asp Lys Gly His Ala Gln Val His Gln Thr
100 105 110

Leu Arg Phe Glu Asn Glu Gly Ala Pro Gly Ser Gly Ala Glu Asn Leu
115 120 125

Thr Cys Glu Ile Leu Ala Ala His Phe Leu Cys Cys Tyr Trp Ala Val
130 135 140

Gly Pro Ala Ala Pro Asp Asp Ile Arg Tyr Ser Leu Arg Val Leu Asn
145 150 155 160

Ala Thr Gly His Glu Val Ala Ser Cys Ser Ala Ala Pro Gly Thr Pro
165 170 175

Pro Thr Arg Cys Gln Ala Asp Asp Leu Thr His Leu Pro Arg Leu Ala
180 185 190

Tyr Ile Val Val Thr Gly Gln Ser Arg Thr Gly Leu Val Arg Phe Leu
195 200 205

Asp Ala Val Val Asn Thr Lys Gly Ile Glu Arg Leu Gly Pro Pro Asp
210 215 220

Asn Val Ser Ala Ser Cys Asn Phe Ser His Cys Thr Ile Thr Trp Ala
225 230 235 240

Pro Pro Pro Thr Trp Ala Pro Met Thr Glu Gln Asp Phe Arg Phe Glu
245 250 255

Ile Glu Trp Lys Lys Ala Glu Pro Ser Ser Ile Ala Gln Lys Val Val
260 265 270

Ile Ala Gly Arg Glu Asp Asn Ala Phe Ala Phe Pro Ser Pro Ala Pro
275 280 285

Arg Gly Arg Leu Trp Val Arg Val Arg Ala Gly Asp Thr Arg Ser Asp
290 295 300

Arg Trp Ser Asp Trp Ser Pro Ala Leu Glu Leu Gly Ser Glu Ala Thr
305 310 315 320

Thr Pro Pro Arg Ala Leu Val Leu Ala Ala Ser Ser Cys Ala Ala Leu
325 330 335

Leu Cys Ala Leu Ala Leu Gly Ala Ala Cys Arg Arg Leu Ala Leu Ser
340 345 350

Arg Arg Leu Leu Pro Pro Ile Pro Gly Ile Arg Asp Arg Val Ser Asp
355 360 365

Asp Glu Arg Val Asn Ser Glu Thr Leu Arg Lys Asp Leu Leu Arg Pro
370 375 380